

AMENDMENT UNDER 37 C.F.R. § 1.111
Appln. No. 10/699,795

AMENDMENTS TO THE DRAWINGS

FIG. 7A has been amended to include reference numerals 10, 11, and 12.

FIG. 10 has been amended so that the reference numeral 20 has been replaced with 120.

Attachment: Replacement Sheets

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REMARKS

Claims 1-26 are all of the pending claims. Claim 1 is the only independent claim.

Objections

The Examiner has objected to the drawings and specification. In response, Applicant has amended the drawings and specification to address the Examiner's concerns and respectfully requests the Examiner to withdraw this objection.

Claim Rejection Under 35 U.S.C. § 112

Claims 2, 4-25 are rejected under 35 U.S.C. § 112 (second paragraph) as being indefinite. In response, Applicant has amended these claims and respectfully requests the Examiner to withdraw this rejection.

Claim Rejection Under 35 U.S.C. § 102

Claims 1-3 and 26 are rejected under 35 U.S.C. § 102(b) as being anticipated by Bechtel, et al. (U.S. Patent No. 6,130,421).

Applicant has amended independent claim 1 so that it recites that the sensitive area of the matrix is divided into a plurality of separated sub-areas designed for different specific functions, part of said sub-areas being dedicated to scene monitoring and part of the sub-areas being dedicated to *detection of environmental parameters*, said division being achieved by said plurality of optical devices.¹ Applicant respectfully requests the Examiner to withdraw the rejection of claim 1 at least because Bechtel does not disclose all of the recitations of amended claim 1.

¹ See also claim 1 of corresponding, issued EP Patent No. 1 148 089 B1.

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The basic purpose of the visual system of claim 1 is to provide an optical system comprising a matrix of sensors, in which the sensitive area of the matrix is divided into a plurality of separated sub-areas. Each sub-area receives light focused by a respective optical device. Various optical devices are provided having different directions and/or fields of view. Each optical device is associated to a specific sub-area of the sensitive area of the matrix to fulfill a specific function. Therefore, different sub-areas cooperate with different optical devices in a totally separated manner to fulfill different functions. Part of the sub-areas are dedicated to scene monitoring and part of the sub-areas are dedicated to detection of environmental parameters, the division of functions being achieved by the plurality of optical devices, each of which focuses light on a different sub-area.

In contrast, Bechtel discloses a sensor system specifically dedicated to detecting the presence of headlamps on oncoming vehicles and tail lights on vehicles approached from the rear.² The sensitive area of Bechtel's CMOS matrix sensor is divided into "sub-windows" associated to two optical systems.³ In particular, two lenses 106, 108 are provided which focus lights on two separated sub-windows of the sensitive area of the matrix.⁴

However, Bechtel does not teach a total separation of function between different sub-windows, as it is instead provided in the case of the system of claim 1.⁵ For example, one of the two lenses of Bechtel provides an image that has predominantly red components and the other

² See Bechtel at Abstract.

³ See Bechtel at FIG. 2 & 7:48.

⁴ See Bechtel at 6:46-67 & Abstract.

⁵ See Bechtel at 5:23-32.

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provides an image which has predominantly red compliment components. Accordingly, bright spots in the red image are used to provide an indication of the presence of tail lights in the front scene, whereas bright spots in both the red and the red compliment images are used to provide an indication of the presence of the headlamps in the front scene. Therefore, the detection of oncoming vehicles is obtained not by a single lens independently from the other, but rather through the cooperation of the two optical systems and the respective sub-windows. Therefore, the total separation of functions between different sub-areas of the sensitive matrix with a corresponding total separation of functions of different optical systems, respectively associated with different sub-areas, is not disclosed nor even remotely suggested by Bechtel.

Moreover, amended claim 1 specifically indicates that part of the sub-areas is dedicated to *detection of environmental parameters*, a feature that clearly is not disclosed in Bechtel.

Therefore, Applicant respectfully requests the Examiner to withdraw the rejection of independent claim 1.

With respect to dependent claims 2, 3, and 26, Applicant respectfully requests the Examiner to withdraw these claims at least because of their dependency from claim 1.

Claim Rejections Under 35 U.S.C. § 103

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bechtel in view of Stam et al. (U.S. Patent No. 6,611,610). Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bechtel in view of Stam ‘610 and Stam, et al. (U.S. Patent No. 5,923,027). Claims 6-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bechtel in view of Stam ‘610, Stam ‘027, and further in view of Smith, et al. (U.S. Patent No. 6,281,806). Claims 13, 14, 19 and 20-25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bechtel in

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view of Nakamura, et al. (U.S. Patent No. 5,266,828). Claims 13, 17 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bechtel in view of Teder (U.S. patent No. 5,661,303). Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bechtel in view of Nakamura, and further in view of Hodge, et al. (U.S. Patent Publication No. 1004/0057117). Finally, claim 16 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bechtel in view of Nakamura and Hodge.

With respect to dependent claims 4-25, Applicant respectfully requests the Examiner to withdraw these claims at least because of their dependency from claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: May 8, 2007